



**Work Order ID 109845**

Tuesday, December 03, 2013 12:52:21 PM

**\*109845\***

Page 2

Item ID: DSI 9676-011

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Basket Strut Upgrade

Stop **\*NS2\***

Start Date: 12/3/2013 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 12/5/2013 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan Accept Reject Reject Insp.  
Code Qty Qty Number Stamp

130

0.00

**\*130\***

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP DSI9676-  
011 Location: \_\_\_\_\_

SH.P

DAS  
6  
9-89

13/12/6

①

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

MO 13-12-06

MF  
13-12-06

# Checklist Print

Tuesday, December 03, 2013 12:52:17 PM

Page 1

Work Order ID: 109845  
Parent Item: DSI 9676-011  
Parent Item Name: Basket Strut Upgrade

Start Date: 12/3/2013

Required Date: 12/5/2013

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.12.02 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4794-041 Strut Assembly		Manufactured	No			110	Each	0.0000	1	1	985 10895	109854	
D4901-U Bracket		Manufactured	No			110	Each	1.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST126		1							
				107752		1							
AN310G4 Nut		Purchased	No			110	Each	82.0000	2	2			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST342		82							
				126192		32							
				M125952		50							
AN4-7 Bolt		Purchased	No			110	Each	0.0000	2	2			
MS24665-151 Cotter Pin		Purchased	No			110	Each	223.0000	2	2			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA		28							
				17566		28							
				ST323		195							
				122802		20							
				124859		4							
				125646		71							
				m127305		100							
NAS1149F0463P Washer		Purchased	No			110	Each	775.0000	4	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST295		775							
				124859		375							
				m123374		400							

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-837 Rev. A AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-837 Rev. 0  
REF. TCCA STC: SH13-22

## 1.0 Purpose

The purpose of this Dart Service Instruction (DSI) is to upgrade the D4794-1 Strut that was provided with the D117-837-011 Heli-Utility-Basket at CHG 001 to a D4794-041 Strut Assembly for ease of installation and improved durability in service.

## 2.0 Installation of DSI 9676-011

- 2.1 Remove and discard existing D4794-1 Strut and D4911-1 Bracket. Discard the hardware used to attach the strut to the D4911-1/-3 Brackets. Refer to ICA-D117-837 Figures 25-4 and Figure 25-5.
- 2.2 Enlarge the hole to  $\varnothing 0.261$ " (G drill) on D4911-3 Bracket. Remove bracket from airframe as required. Deburr hole.
- 2.3 Install new D4911-1 Bracket to D4784-011 Basket Assy per Figure 25-5 of ICA-D117-837.
- 2.4 Install D4794-041 Strut Assy to D4911-1/-3 Brackets, make adjustment to AN665-34R threaded clevises and lock with NAS509-4C jam nuts. Install D4794-041 Strut Assy using AN4-7 bolts, NAS1149F0463P washers, AN310C4 castellated nuts and secure with MS24665-151 cotter pins. Secure NAS509-4C Jam nuts using lock wire per AC43.13 or MS33540. AN4-7 bolt should be a slip fit in both ends of the strut assy. Refer to Figure 1 of this DSI.
- 2.5 After adjustment, use lockwire in hole of AN665-34R clevises to check for proper engagement of threads.

## 3.0 Updated Parts List

For D117-837-011 @ CHG 002, Parts List in ICA-D117-837 and IIN-D117-837 is updated as follows:

### ADD

Qty -011	Part Number	Description
X	D117-837-011	HELI-UTILITY-BASKET, LH/RH
1	D4794-041	STRUT ASSEMBLY
2	AN310C4	NUT, CASTELLATED
2	AN4-7	BOLT
2	MS24665-151	COTTER PIN
4	NAS1149F0463P	WASHER

### REMOVE

Qty -011	Part Number	Description
X	D117-837-011	HELI-UTILITY-BASKET, LH/RH
1	D4794-1	STRUT
2	AN3-3A	BOLT
4	NAS1149F0332P	WASHER
2	MS21042-3	NUT

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

DATE: 13.11.19  
CERT. NO.: SH13-22  
ISSUE NO.: 1

A	NEW ISSUE	RF	13.11.19
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9676	SHEET 1 OF 2
APPROVED	AS	TITLE	SCALE
DE APPR.	CH	BASKET STRUT UPGRADE	NTS
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DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

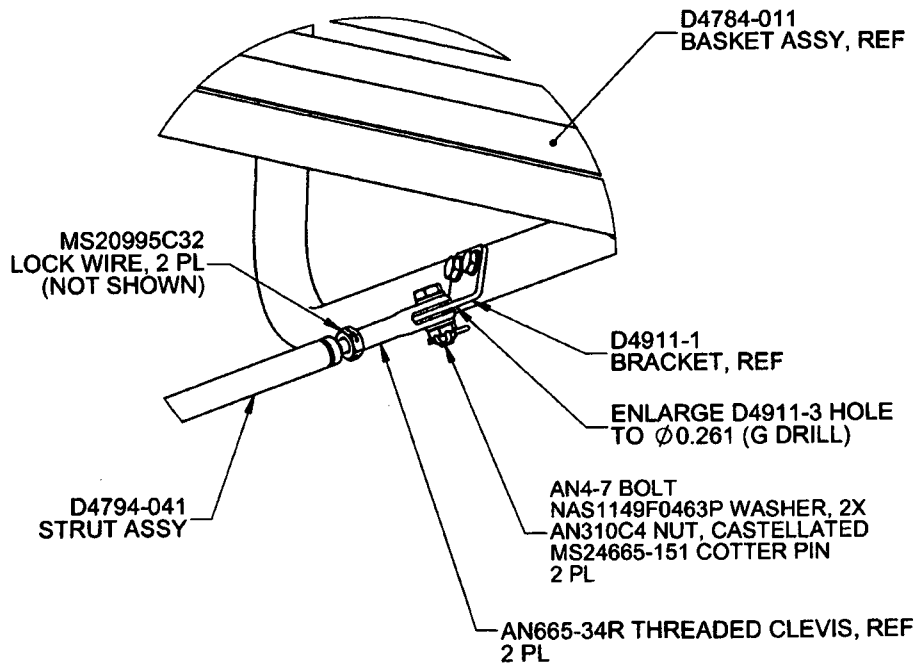
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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**NOTE:** Customers who already have D117-837-011 at CHG 001 can procure the DSI 9676-011 kit from Dart.

Qty -011	Part Number	Description
X	DSI 9676-011	BASKET STRUT UPGRADE
1	D4794-041	STRUT ASSEMBLY
1	D4911-1	BRACKET
2	AN310C4	NUT, CASTELLATED
2	AN4-7	BOLT
2	MS24665-151	COTTER PIN
4	NAS1149F0463P	WASHER

#### 4.0 Weight & Balance

This DSI has a negligible effect on Weight & Balance



**FIGURE 1**  
(BASKET MESH AND LOCK WIRE NOT SHOWN FOR CLARITY,  
BASKET END SHOWN, AIRFRAME END SIMILAR)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED  
BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 13.11.19  
CERT. NO.: SH13-22  
ISSUE NO.: 1

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	<i>[Signature]</i>	DRAWING NO. REV. A
MFG. APPR.	N/A	DSI 9676 SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE SCALE
DE APPR.	<i>[Signature]</i>	BASKET STRUT UPGRADE NTS
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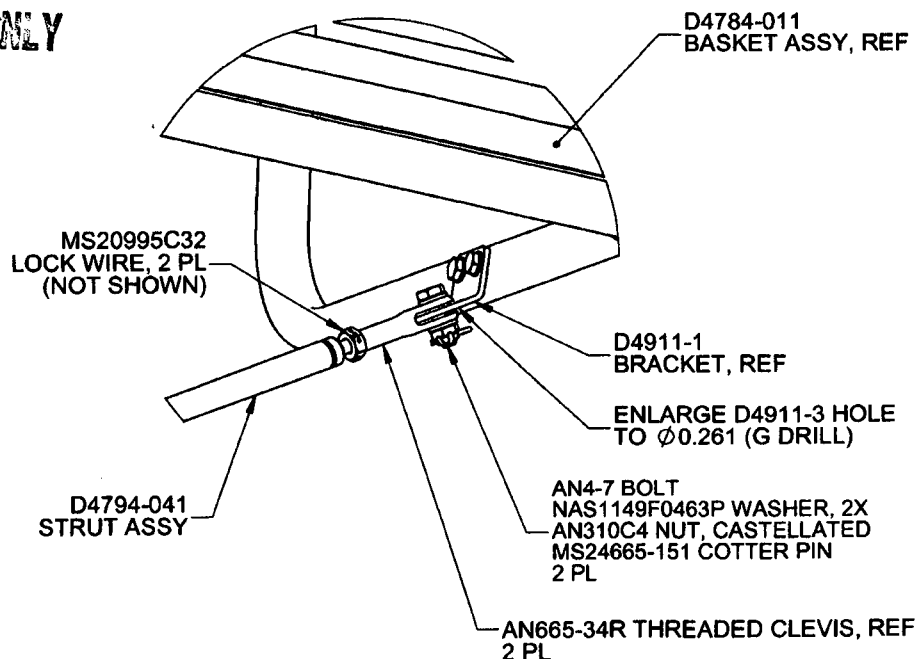
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4	NAS1149F0463P	WASHER

#### 4.0 Weight & Balance

This DSI has a negligible effect on Weight & Balance

REFERENCE ONLY  
B1216  
ST






**FIGURE 1**  
(BASKET MESH AND LOCK WIRE NOT SHOWN FOR CLARITY,  
BASKET END SHOWN, AIRFRAME END SIMILAR)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED  
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D. SHEPHERD (DE # 02)

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CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9676	SHEET 2 OF 2
APPROVED		TITLE	SCALE
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